

Bollettino Settimanale

Lunedì 19 giugno 2017	Martedì 20 giugno 2017	Mercoledì 21 giugno 2017	Giovedì 22 giugno 2017	Venerdì 23 giugno 2017
<p style="text-align: center;">International Workshop New Frontiers in Gravitational-Wave Astrophysics Aula Conversi</p>	<p style="text-align: center;">International Workshop New Frontiers in Gravitational-Wave Astrophysics Aula Conversi</p> <p>SEMINARIO GENERALE AULA CARERI</p> <p>Liquid Crystals at Interfaces <i>Prof. Claudio Zannoni</i> <i>(Dipartimento di Chimica Industriale "Toso Montanari", Università di Bologna)</i></p> <p>For a variety of practical applications, ranging from displays to organic electronics devices such as organic field effect transistors, solar cells etc., liquid crystals are employed in very thin films, where surfaces play an essential role. In particular, the type of director orientation, i.e. planar (either uniform or degenerate) or tilted or perpendicular with respect to the interface, as well as the extent of anchoring and orientational order, is key to the proper functioning of the various devices. Behaviour of liquid crystals at interfaces with vacuum, crystalline or amorphous solids, polymers or other functionalized surfaces is also of fundamental interest to understand how molecules forming liquid crystals interact with their environment. Thus, it is somewhat surprising that surface effects are still in most cases described only empirically, while little is known on their molecular origin. In this talk we shall show that computer simulations for coarse-grained models (e.g. for the attractive–repulsive Gay-Berne model [1]) and for systems at full atomistic resolution [2-8] start to shed some light on the interfacial behavior of liquid crystals. In particular, we shall briefly summarize the main features of the models and we shall show examples for the prediction of the alignment and anchoring of nematics (cyanobiphenyls in particular) in freely suspended films [4] or at the interface with different solid surfaces e.g. silicon [5], crystalline and glassy silica with different roughness [6], polymers [7] as well as soft self-assembled monolayers [8].</p>	<p style="text-align: center;">International Workshop New Frontiers in Gravitational-Wave Astrophysics Aula Conversi</p>	<p style="text-align: center;">International Workshop New Frontiers in Gravitational-Wave Astrophysics Aula Conversi</p>	